

## CLAIMS

What is claimed is:

1. A method of controlling a digital projector, comprising:
  - receiving a request to turn on the digital projector;
  - receiving temperature data associated with a light source from a temperature sensor;
  - comparing the temperature data to a predetermined threshold;
  - turning on a cooling device if the temperature data is above the predetermined threshold and if a turn-on request has been received;
  - and
  - turning on the light source if the temperature data is at or below the predetermined threshold and if a turn-on request has been received.
2. The method of claim 1 wherein the digital projector is selected from a set of projectors including: an overhead projector, a video projector, a projection television, and a cinema projector.
3. The method of claim 1 wherein the light-source is selected from a set of lamps including xenon lamp and a high-pressure mercury vapor lamp.
4. The method of claim 1 wherein the predetermined threshold is substantially the boiling point of mercury.
5. The method of claim 1 wherein the turn-on request received is from an on/off control mounted on the digital projector.
6. The method of claim 1 wherein the turn-on request received from a remote control.
7. The method of claim 1 wherein the received temperature data comprises data taken in proximity to the light source.

**8.** The method of claim **1** wherein the received temperature data comprises data taken from the internal environment of the digital projector.

**9.** A method of controlling a digital projector, comprising:

displaying images with the digital projector using a light-source;

receiving a request to turn off the digital projector;

turning off the light-source in response to the request received; and

turning off a cooling device in response to the request and within a time frame without consideration of the light-source temperature.

**10.** The method of claim **9** wherein the time frame is selected from a set of time frames including: a substantially immediate time frame, a few seconds, and a convenient period of time for a user.

**11.** The method of claim **9** wherein the digital projector is selected from a set of projectors including: an overhead projector, a video projector, a projection television, and a cinema projector.

**12.** The method of claim **9** further comprising:

cooling the light-source passively upon receiving the turn-off request.

**13.** The method of claim **9** wherein the light-source is a high-pressure mercury vapor lamp.

**14.** The method of claim **9** wherein the turn-off request received is from an on/off control mounted on the digital projector.

**15.** The method of claim **9** wherein the turn-off request received from a remote control.

**16.** The method of claim **9** wherein the cooling device is a fan.

**17.** A light source control apparatus for a digital projector, comprising:

a light source for the projection of images;  
a temperature sensor for measuring the temperature of the light source;  
a cooling device for lowering the temperature of the light source;  
an on/off control to activate the light source; and  
a control mechanism for processing temperature data and determining  
light source control and cooling device control, wherein the light  
source is activated when below a temperature threshold.

**18.** The apparatus of claim 17 wherein the cooling device is turned on if  
the temperature data is above the predetermined threshold and if a turn-on  
request has been received; and

turning on the light source if the temperature data is at or below the  
predetermined threshold and if a turn-on request has been received.

**19.** The apparatus of claim 17 wherein the turning off the light-source in  
response to the request received; and

turning off a cooling device in response to the request and within a time  
frame without consideration of the light-source temperature.

**20.** The apparatus of claim 17 wherein a light source comprises a high-  
pressure mercury vapor lamp.

**21.** The apparatus of claim 17 wherein a temperature sensor comprises a  
resistive sensor.

**22.** The apparatus of claim 17 wherein a temperature sensor comprises a  
silicon PN-junction sensor.

**23.** The apparatus of claim 17 wherein a temperature sensor is mounted  
in proximity to the light source.

24. The apparatus of claim 17 wherein a temperature sensor is mounted within the body of the digital projector.

25. The apparatus of claim 17 wherein a cooling device comprises a fan.

26. The apparatus of claim 17 wherein a on/off control comprises a switch mounted on the digital projector.

27. The apparatus of claim 17 wherein an on/off control comprises a remote control.

28. The apparatus of claim 17 wherein a system controller comprises a computer system, integrated into digital projector, including a central processing unit, random access memory, mass storage, and access to an external network.

29. An apparatus for controlling a digital projector, comprising:

means for receiving a request to turn on the digital projector;

means for receiving temperature data associated with a light source from a temperature sensor;

means for comparing the temperature data to a predetermined threshold;

means for turning on a cooling device if the temperature data is above the predetermined threshold and if a turn-on request has been received; and

means for turning on the light source if the temperature data is at or below the predetermined threshold and if a turn-on request has been received.

30. An apparatus for controlling a digital projector, comprising:

means for displaying images with the digital projector using a light-source;

means for receiving a request to turn off the digital projector;

means for turning off the light-source in response to the request received;  
and

means for turning off a cooling device in response to the request and  
within a time frame without consideration of the light-source  
temperature.

31. A computer program product for controlling a digital projector, tangibly stored on a computer-readable medium, comprising instructions operable to cause a programmable processor to:

receive a request to turn on the digital projector;

receive temperature data associated with a light source from a  
temperature sensor;

compare the temperature data to a predetermined threshold;

turn on a cooling device if the temperature data is above the  
predetermined threshold and if a turn-on request has been received;  
and

turn on the light source if the temperature data is at or below the  
predetermined threshold and if a turn-on request has been received.

32. A computer program product for controlling a digital projector, tangibly stored on a computer-readable medium, comprising instructions operable to cause a programmable processor to:

display images with the digital projector using a light-source;

receive a request to turn off the digital projector;

turn off the light-source in response to the request received; and

turn off a cooling device in response to the request and within a time  
frame without consideration of the light-source temperature.